MOTOROLA

October 29, 1999

Ms. Magalie Roman Salas, Secretary
Federal Communications Commission
The Portals, TW-A325
445 12th Street, S.W.
Washington, D.C. 20554

Re: Ex Parte Notification – WT Docket No. 99-168

Dear Ms. Salas:

On October 28, 1999, Richard Barth, Stuart Overby, Steve Sharkey and Jeanine Poltronieri of Motorola met with Mark Schneider, Legal Advisor to Commissioner Ness and discussed issues addressed in the *Notice of Proposed RuleMaking* in the above-referenced proceeding.

At this meeting Motorola discussed a proposed band plan for the 746-806 MHz spectrum that has been submitted in numerous ex parte filings in this proceeding. This plan would allocate a portion of the commercial-use spectrum, licensed by auction, for use by the Private Mobile Radio Service (PMRS). The purpose of this allocation, in addition to satisfying a demonstrated need by PMRS for additional spectrum, would be to manage interference at the interfaces between the Public Safety and the remaining commercial-use spectrum.

During the meeting, Motorola expressed its view that, because of the propagation characteristics of the spectrum at issue and its proximity to other mobile services, the 36 MHz under consideration in the 746-806 MHz band is ideal for meeting the demonstrated needs of mobile users. Accordingly, it should be licensed in a way that facilitates mobile use but does not prohibit fixed uses that are technically compatible.

We also discussed a proposal filed by FreeSpace Communications that would expand eligibility for use of the transition zones to include commercial carriers. Motorola disagrees that the spectrum immediately adjacent to public safety is appropriate for commercial use. Motorola has extensive experience in dealing with interference between commercial and public safety systems and performed in-depth analysis to determine the amount of spectrum necessary to provide adequate protection to public safety systems operating in the 746-806 MHz band. Motorola has also reviewed the information that has been filed by FreeSpace and we do not believe that there is sufficient detail to conclude that the technical limits proposed by FreeSpace are sufficient to ensure protection to public safety operations. Although FreeSpace proposes to limit the power for commercial systems operating in bands immediately adjacent to public safety, these commercial systems would be deployed in a manner fundamentally different that then the typical high power, high height public safety operations. Depending on the deployment and the type of emission from the commercial system, interference to public safety is a very real possibility.

Motorola expressed its view that commercial operations, such as the one proposed by FreeSpace, can be accommodated in bands designated for commercial services. The Commission's rules for aggregation and disaggregation of CMRS spectrum provide sufficient flexibility to accommodate a wide variety of commercial services. The 30 MHz of spectrum available for commercial use under Motorola's

plan should be licensed in large paired spectrum blocks suitable for the type of CMRS uses that are being implemented around the world. Such rules provide flexibility to accommodate low power operations to the extent that they are demanded by customers. The record before the Commission clearly demonstrates a need for additional spectrum for private uses and the Commission should not miss this unique opportunity to satisfy those requirements while maximizing the efficient use of the spectrum.

Finally, Motorola stated its opinion that the portion of the commercial use band that in its plan is not allocated for PMRS is ideally suited for 3G services. In order to facilitate those uses, Motorola believes that spectrum in the non-PMRS portion of the band should not be subject to the existing CMRS spectrum cap, nor should there be any other limitations to an operator acquiring the non-PMRS spectrum in this band.

Attached are the slides used in this presentation. Please contact Steve Sharkey at (202) 371-6943 regarding any questions concerning this matter.

Respectfully Submitted,

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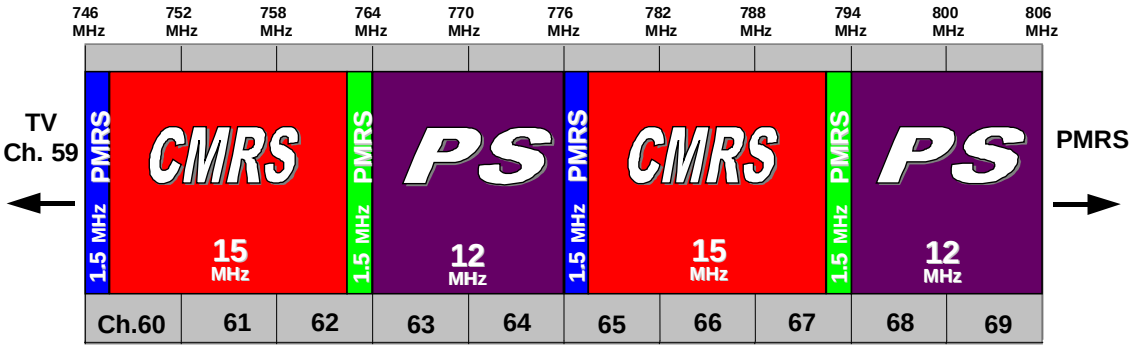
Steve B. Sharkey
Motorola, Inc.

Attachment
cc:
Mark Schneider

Band Plan



- 6 MHz allocated for private auctioned (PMRS), in two blocks of 1.5 + 1.5 MHz with band managers
- 30 MHz for Commercial Carriers (CMRS); 15+15 MHz.
- 24 MHz for public safety (allocation completed)

Motorola Band Plan

- Plan taking into consideration requirements of cellular/PCS, PMRS and Public safety
- Cellular/PCS have demonstrated need for additional spectrum to accommodate new services.
- PMRS have demonstrated need for additional spectrum to satisfy requirements not served by CMRS

Private Mobile Spectrum

- 6 MHz dedicated to PMRS
- Auctioned to Band Managers for distribution to PMRS eligible users
- One nationwide license
  - 762.5-764.0 paired with 792.5-794.0 MHz
- One regional license
  - 52 Major Economic Areas
  - 746.0-747.5 paired with 776.0-777.5 MHz
- Bidders can bid for both nationwide and regional licenses

Band Manager

- Obtains spectrum through auction
- Redistributes and manages use of spectrum for eligible PMRS users
- Cannot offer communications service, but can charge fee for access to spectrum
- Manages spectrum to maximize efficiency and minimize interference

Need to Protect Public Safety

- Experience at 800 MHz has shown that mix of adjacent frequency high height and low height systems creates interference problems “near”, in close proximity, to an interfering site and “far” from desired site(s)
  - Mixed “high level” and “low level” systems

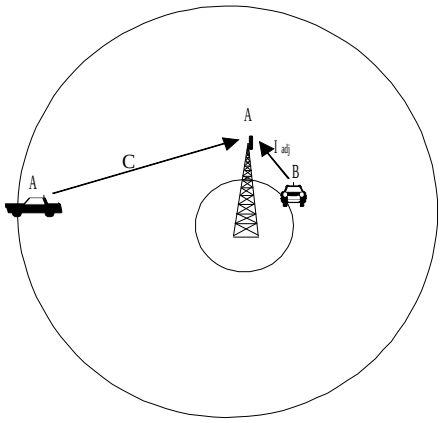
Spectrum Compatibility

- Cellular Type Systems can cause Interference with Conventional usage
  - Classic Near-Far Problem
    - Interference Zone around Multi-transmitter Sites
    - Strong Interference Signal and Medium to Weak Desired Signal
  - Frequent Changes to Frequency Plan to increase Capacity
  - Average Power kept high to provide portable in-building coverage

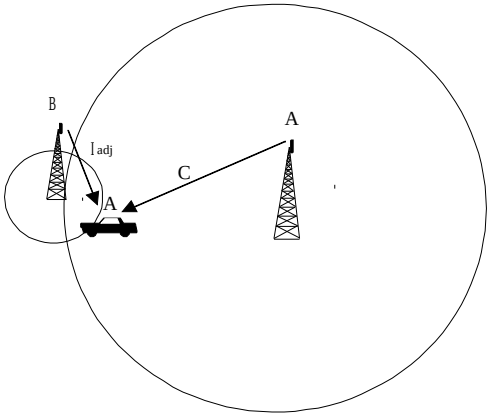
High Power Broadcast Use

- Similar problems to those discussed
- High HAAT/high ERP causes severe interference to lower height/lower ERP services
- Mobile services cause interference in fringe broadcast coverage areas

Near - Far Scenarios



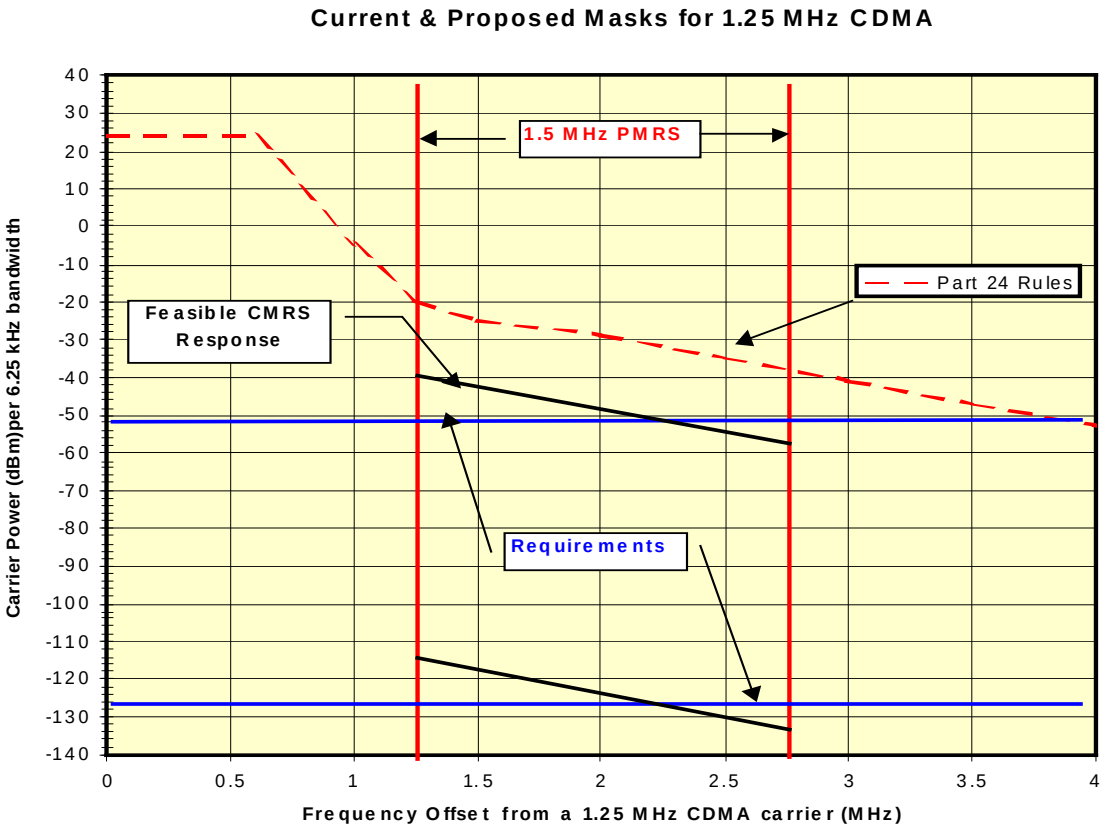
Unit transmitting close (**near**) to a Site on nearby undesired channel interferes with a weak (**far**) mobile talking inbound on the desired channel.



Unit **far** from desired site is interfered with when close (**near**) to nearby undesired channel base.

Public Safety Spectrum Protection

- Interference from CMRS spectrum modeled as a 1.25 MHz CDMA carrier
- This is the widest of the existing technologies deployed in the cellular and PCS bands
- All other technologies, such as IS-136, GSM, EDGE, are narrower and will also meet proposed protection rules


Current & Proposed Masks for 1.25 MHz CDMA
Carrier Power (dBm)per 6.25 kHz bandwidth
40
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
-110
-120
-130
-140
0
0.5
1
1.5
2
2.5
3
3.5
4
Frequency Offset from a 1.25 MHz CDMA carrier (MHz)
1.5 MHz PMRS
Part 24 Rules
Feasible CMRS Response
Requirements

Example of two 7.5 MHz licenses